

ABSTRACT OF THE DISCLOSURE

A fixed magnetic layer contains a first magnetic layer formed on a non-magnetic metal layer. The non-magnetic metal layer is composed of an X-Mn alloy (where X is selected from Pt, Pd, Ir, Rh, Ru, Os, Ni, and Fe). While atoms forming the first magnetic layer and atoms forming the non-magnetic metal layer are being aligned with each other, strains are generated in the individual crystal structures.

By generating the strain in the crystal structure of the first magnetic layer, the magnetostriction constant  $\lambda$  is increased. As a result, a magnetic sensor having a large magnetoelastic effect can be provided.